



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/733,451

12/12/2003

Simon Haykin

3244-83

1419

1059

7590

06/09/2006

BERESKIN AND PARR  
40 KING STREET WEST  
BOX 401  
TORONTO, ON M5H 3Y2  
CANADA

EXAMINER

SWERDLOW, DANIEL

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/733,451

Applicant(s)

HAYKIN ET AL.

Examiner

Daniel Swerdlow

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 1-23 and 29-48 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-28 and 49-52 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 1 through 23 and 29 through 48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10 May 2006.

2. Applicant's election with traverse of invention III in the reply filed on 10 May 2006 is acknowledged. The traversal is on the ground(s) that search and examination of all inventions can allegedly be made without serious burden. This is not found persuasive because the combination and each of the subcombinations have distinct classifications such that examination of all inventions would require a burdensome search.

The requirement is still deemed proper and is therefore made FINAL.

3. **This application is in condition for allowance except for the presence of claims 1 through 10, 16 through 23, 29 through 37 and 42 through 48 directed to an invention non-elected with traverse in the reply filed on 10 May 2006. Claims 11 through 15 and 38 through 41 depend from independent claims drawn to a non-elected invention, but would be allowable if claims 11 and 38 were rewritten in independent form including all elements of the claims 1 and 29, respectively.** Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue.

Art Unit: 2615

Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

***Allowable Subject Matter***

4. The following is a statement of reasons for the indication of allowable subject matter:

5. Regarding Claim 24, US Patent 5,029,217 to Chabries et al. discloses a hearing enhancement apparatus (Fig. 4) comprising: processing circuits (403, 405) that correspond to the normal hearing model unit claimed (column 7, lines 31-39); processing circuits (407, 409) that correspond to the neuro-compensator claimed (column 8, line 67-column 9, line 1); and transfer functions  $H_1(k)$  and  $H_2(k)$  that correspond to the damaged hearing model claimed (column 9, lines 57-60; column 10, lines 18-23). However, Chabries does not disclose comparing an output of the normal hearing model with an output of the damaged hearing model as claimed. US Patent 5,561,598 to Nowak et al. discloses an adaptive control system that compares the output of a fixed filter (62) and adaptive filter (70) arrangement with an acoustic plant (40) output to create an error signal (52) to update weights (67). However, there is no teaching or suggestion in the prior art to adjust weights in a hearing loss compensator according to a comparison of the output of a normal hearing model due to an input signal and the output of a damaged hearing model due to a compensated input signal as claimed. Therefore, the claim is allowable.

6. Claims 25 through 28 are allowable due to dependence from Claim 24.

7. Claim 49 is essentially similar to Claim 24 and is allowable for the same reasons.

8. Claims 50 through 52 are allowable due to dependence from Claim 24.

Art Unit: 2615

9. Claims 11 through 15 and 38 through 41 depend from independent claims drawn to a non-elected invention, but would be allowable if claims 11 and 38 were rewritten in independent form including all elements of the claims 1 and 29, respectively.
10. Claim 11 contains limitations similar to those of Claim 24 and is allowable matter for the reasons stated above apropos of that claim.
11. Claims 12 through 15 are allowable matter due to dependence from Claim 11.
12. Claim 38 contains limitations similar to those of Claim 24 and is allowable matter for the reasons stated above apropos of that claim.
13. Claims 39 through 41 are allowable matter due to dependence from Claim 38.

#### *Conclusion*

14. Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

Art Unit: 2615

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel Swerdlow  
Primary Examiner  
Art Unit 2615

ds  
8 June 2006